

Courtesy: Jim Berryman, Washington Evening Post

## America's Most Valuable Export Doesn't Cost Anything!

America's most valuable export doesn't cost a penny! And that's good news to budget-minded citizens.

Brotherhood . . . "We hold these truths to be self-evident" . . . is democracy at its finest, and the very basic heart of our national heritage. During the span between Lincoln and Washington's birthdays, the nation observes Brotherhood Week, as set apart by the National Conference of Christians and Jews, as that special time to reaffirm our stand on the real tenets of a democracy.

Democracy doesn't dictate that you like anybody. It merely asks that you give everyone a 'fair shake,' that you attribute the same rights to every other man, woman and child you accept as your own birthright.

### Individual's Worth

The NCCJ is not a religious organization. It is not an inter-faith group. It is merely a civic and education organization—a national and voluntary organization dedicated to the fundamental principles of democracy and, like democracy, motivated by the basic tenets of the Judeo-Christian religion—belief in the prime worth of the individual.

Back in 1963, at the 100th-anniversary of the Gettysburg address, President Johnson said, "Our nation found its soul in honor on these fields of Gettysburg one hundred years ago. We must not lose that soul in dishonor now on the fields of hate . . . In this hour, it is not our respective races which are at stake—it is our nation. Let those who care for their country come forward, North and South, white and Negro, to lead the way through this moment of challenge and decision. The Negroes say, 'Now,' others say, 'Never.' The voice of responsible Americans—the voice of those who died here and the great man who spoke here—their voices say, 'Together.' There is no other way."

### Freedom's a New Look

Americans are being asked to take a new look at freedom as it is guaranteed to us by the United States Constitution. Newspaper headlines every day document the massive changes in long held patterns of human behavior. Civil rights have mushroomed, not only in the most conspicuous area of race relations, but in such other devious areas as Sunday closing laws, federal aid to education, birth control and the law, legalized gambling and the emotion laden decisions of the Supreme Court on prayers and religious practices in the public schools.

Every American is involved personally and emotionally in one or more of these complex issues. Freedom is no longer a privilege. We can no longer have our cake and eat it too, in a kind of Alice-in-Wonderland world where freedom is meant for "me" but not for "thee." Freedom has become the moral responsibility of Democracy. Every citizen must now relate this moral responsibility, first to himself, and then to his fellow Americans of every race, creed and nationality.

### Freedom at Stake

Our ability to accept this responsibility of freedom and equality for all will determine the outcome of freedom in the future.

Continued on Page 4

### SAFETY SCOREBOARD

**The Y-12 Plant Has  
Operated  
80 Days Or  
2,202,000 Man-Hours  
(Unofficial Estimate)  
Through February 19  
Without A Disabling  
Injury  
A Job Well Done  
Is Also Safely Done**

## Linde To Build Kansas City Plant

Plans to construct an air separation plant at Kansas City, Missouri, were announced recently by Birny Mason Jr., chairman of the board, Union Carbide Corporation. Scheduled for completion during the second quarter of 1968, the plant will produce both liquid oxygen and liquid nitrogen totalling 100 tons a day and will supply up to 30 tons per day of high-purity gaseous oxygen via pipeline to Armco Steel Corporation's nearby mill.

The latest in a series of new air separation plants being built by Union Carbide's Linde Division, the new installation will supply oxygen and nitrogen in liquid form throughout a large part of the Midwest, as well as meet Armco Steel's oxygen needs.

Goffe Benson, Linde Division president, said that Union Carbide currently has completed or is constructing new air separation plants in Minnesota, New York, Connecticut, Indiana, Alabama, Texas, and California, in order to "keep pace with and get ahead of" the steadily growing requirements for atmospheric gases. "This large capital spending program for new installations is a fact of life for this industry since you have to build today to be able to do business tomorrow. Our market research indicates strongly that the Kansas City business area can support a liquid oxygen-nitrogen plant," he stated.

Production of liquefied oxygen and nitrogen at Kansas City is designed to meet the increasing demand for these products throughout Missouri, Kansas, Colorado, Nebraska, and western Iowa. Liquid nitrogen requirements, especially, have been growing at a very fast pace in such new fields of application as food preservation and inert-gas purging, testing, and blanketing in the electronic, chemical, petroleum refining, and aerospace industries. The transportation industry's growing acceptance of Polarstream in-transit refrigeration, developed and marketed by Union Carbide, typifies this growth market for liquid nitrogen refrigerant.

## Magic Beads May Be 'Amulets Of Survival'

Magic beads—in the hands of modern chemists — may be the "amulets of survival" for future generations.

These plastic beads, actually ion exchange resins, have the chemical ability to separate what's wanted from what isn't wanted. They are already performing such important missions as conditioning water, making cow's milk more digestible, battling disease by removing impurities from source materials for medicines, neutralizing acids in the stomachs of ulcer patients, stabilizing wines, salvaging gold and silver, refining uranium ore, and capturing radioactive residues released by atomic power plants.

Expanding the uses of ion exchange resins is one of the great challenges of Twentieth Century Chemistry.



**ERIC E. JOHNSON, STATISTICAL SERVICES**, has been certified by the American Society for Quality Control as a "Quality Engineer." Johnson more than met the requirements set out by the ASQC, of which he is a senior member. He is congratulated by Robert P. Lucke, right, also of Statistical Services.

## Eric Johnson Is Certified As Quality Engineer By ASQC

Eric E. Johnson, a statistician in Statistical Services, has been certified as a Quality Engineer by the American Society for Quality Control. He recently received his certificate from the ASQC.

The certificate reads:

"Eric Edward Johnson, a member of this Society, has satisfactorily fulfilled the requirements established by the Education Training Institute of the Society for professional attainment in Quality Engineering and is, therefore, certified as a Quality Engineer."

Johnson is a senior member of the ASQC, and more than fulfilled the requirements set out as a minimum by the society for qualifying as a Quality Engineer.

Requirements set out by the society call for the publication of at least one article on quality control or industrial statistics in a professional journal, the proceedings or transactions of a conference, or a company house organ.

### Several Published Papers

Johnson has had articles appear in several publications: **Chemical Engineering**, September 27, 1956, "Use of Proportional Divider to Find Two-Sigma Limit;" **Industrial Quality Control**, December, 1963, "Sample Size for Specified Confidence Interval;" same publication, March, 1959, "Nomograph for Binomial and Poisson Significance Tests;" and has published a paper **General Chemistry Y-1181**, Office of Technical Services, July 23, 1957, "Air Density Corrections for Reduction of Weighings to Vacuo."

The qualifying engineer must have presented at least one paper on quality control or industrial statistics before a professional society group at the Section or Chapter level.

The Y-12 statistician delivered

a paper on "Tolerance Limits" at the East Tennessee ASQC meeting of February 10, 1960, in Oak Ridge; and presented a five-day lecture series to Y-12's development personnel in October, 1966, on "Curve Fitting."

### Advanced Studies

Another minimum requirement is advanced study . . . he must have at least one course in quality control or industrial statistics . . . either taken or taught. Johnson has had three advanced courses at the University of Tennessee's graduate school . . . "Advanced Problems in Statistics," "Experimental Designs," and "Theory of Least Squares."

Johnson holds a BS and MS degree in chemistry from Creighton University, in his native Omaha, Nebraska.

He lives at 101 Essex Lane, Oak Ridge. Mrs. Johnson is the former Audrey Hall, and the couple has two sons Douglas and Alvin.

### 12-Year Veteran

Johnson came to Y-12 as a statistician January 10, 1955, after working for the National Bureau of Standards, Swift and Company and Cudahy Packing Company, as a chemist.

Besides his senior membership in the American Society for Quality Control, Johnson is a member of the American Statistical Association.

## Physics Division Will Hear McGrory Friday

J. B. McGrory, Oak Ridge National Laboratory Physics Division, will conduct this week's seminar. His subject will be "Survey of Shell-Model Calculation Program."

The seminar is set for Friday, February 24, at 3:15 p.m., in the East Auditorium of ORNL's 4500N building.



# The Bulletin

Published Weekly For The  
Y-12 Employees Of  
UNION CARBIDE  
CORPORATION



NUCLEAR DIVISION

JAMES A. YOUNG *Editor*



American Association Industrial Editors

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## Graham Daughter Is Powell Beauty



Rosa Graham

Miss Rosa Graham has been named Powell High Beauty Queen at the Knox County school. Contestants were judged on beauty, poise, personality and talent.

Along with this title Rosa has been named sports queen candidate, beauty queen candidate in her senior year. Prior to that she has been varsity alternate cheerleader, student council representative, sophomore class favorite, and March Girl of the Month, as well as head majorette.

Miss Graham is a member of the school band, science club, Y-Teens, F.C.A., Pep Club and Signates Social Club.

Rosa is the daughter of Mr. and Mrs. George W. Graham. Her father is in Y-12's Process Maintenance. The Graham home is at 5313 Maywood Road, Knoxville.

The Grahams have one other child . . . a son, George W. Jr. Young Graham, also a graduate of Powell High School, is a sophomore at the University of Tennessee.

## THE HAIL YOU SAY!

Soviet weather scientists have experimented successfully with small rockets launched into violent thunderstorms. The rockets contained chemicals that changed potential hail into beneficial rain, thus saving valuable crops from damage.

## AEC Ships Record \$75 Million Worth Of Enriched Uranium In '66

A record \$75,000,000 worth of enriched uranium was shipped from the Atomic Energy Commission gaseous diffusion plants in 1966 for the rapidly growing nuclear power industry in the United States and abroad.

In commenting on last year's shipments, S. R. Sapirie, Manager of AEC's Oak Ridge Operations said: "Orders for nuclear generating stations placed in 1966 by power utilities far surpassed expectations. In 1966 this country's nuclear generating capacity was slightly more than one million kilowatts, and by 1980 we believe this capacity will exceed one hundred million kilowatts.

"The rapid upswing in orders for nuclear power systems and a corresponding increase in the amount of enriched uranium shipped are very encouraging. This trend will continue at an increased pace in the years ahead, pointing to a bright future for our gaseous diffusion plants and the nuclear power industry in general."

Enriched uranium is shipped from the AEC gaseous diffusion plants at Oak Ridge and Portsmouth, Ohio, as uranium hexafluoride (UF<sub>6</sub>) to privately owned

firms for further processing and eventual fabrication into reactor fuel elements. A number of firms perform the processing and fabrication, operating under licenses issued by the AEC.

One of the largest orders for enriched uranium last year was from the Connecticut Yankee Atomic Power Company for its nuclear generating station under construction at Haddam Neck, Connecticut. Some 170,000 pounds of enriched uranium valued at more than \$22,000,000 was prepared for the plant which is scheduled to go into operation this year producing 462,000 kilowatts of electrical power.

A major foreign shipment of uranium to be used in nuclear power generation involved 108,000 pounds of the nuclear material valued at \$8,000,000 destined for India. The uranium will be converted into fuel elements for twin 190-megawatt reactors at the Tarapur power station which is now under construction on the west coast of India. The reactors are scheduled for operation in 1970. Enriched uranium is being sent to India under a long-term sales contract between the governments of India and the United States.

## Ocean Systems' Divers Make New Record Dives

Union Carbide's Ocean Systems and Navy divers made record deep dives recently. The dives, at the proposed Sea-Lab III site off San Clemente, California, were to the depth of 440 feet. The divers set a new U.S. Navy diving depth record for an underwater swimmer. The project employed Ocean Systems' Advanced Diving System IV, which uses a submersible decompression chamber to transport the divers to and from the work site. When the divers return to the surface, they are transferred to a deck chamber where they undergo decompression in comfortable, controlled conditions. The divers used a conventional non-heated wet suit and a specially designed helmet supplied with the breathing mixture of helium and oxygen.



Only three Y-12ers mark important landmarks with Union Carbide Corporation as the doors close on February. Congratulations.

### 20 YEARS

George M. Del Cour, Machine Maintenance, February 24.

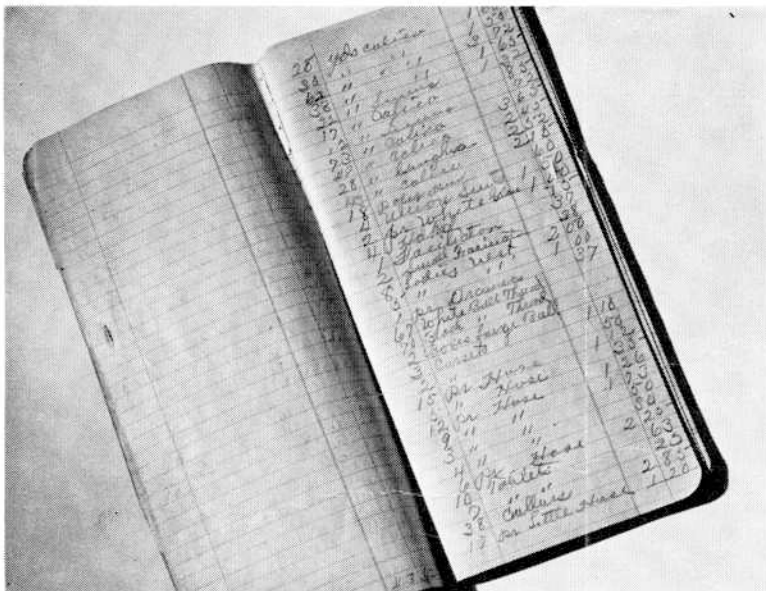
### 15 YEARS

John Lay Jr., Specifications and Systems, February 29.

Otis D. Miller, Stores Department, February 29.

### NO NEW ONES

Actually, there are no new sins. The truth of the matter is, the old ones are just getting better publicity these days.



NORA HURST, TOOL ENGINEERING, was cleaning out an antique chest-of-drawers recently and uncovered this interesting item. It is from her grandfather's store . . . a ledger showing inventory counts, debits and credits to various customers. The date was 1909 . . . and you should get a load of prices then! . . . Calico 5¢ a yard . . . hose 10¢ a pair. Before you start sighing for the 'old days' you'd better take a closer look at the sales. They didn't buy too much in those days, just the bare essentials. (Many customers paid off their bills in produce, like corn, eggs, etc.) Nora says an interesting item in the entries was "hamburger," a piece goods material!



GAME WINNERS IN E, F, G, H, and J Shifts' big party night line up with their loot in photos above. The Shifters next planned event is a crappie rodeo set for late March at Blue Springs Dock.

## Shifters Turn Crowds Away At Big Party Game Night, February 4!

E, F, G, H and J Shifts came up with a turn-away crowd at their big Game Night, Saturday February 4. Fire regulations gauge the number of the crowd, and, unfortunately, some latecomers had to be turned away at the Green Room of the Ridge Recreation Hall.

Many of the familiar faces turned up, however.

The Halseys, Partens and Bar-

nettes turned out to be double winners for the night . . . also C. F. Laymance. The younger fry were in good attendance and seemed to get a big bang out of the events.

Winners were Randy Parten, Gladys McLain, James W. Halsey, Mildred Barnette, Jack Barnette, C. F. Laymance, Mary Hahn, Margaret Benninghoff, Kathleen Parten, Joyce Rollen, Agnes Hardin, C. B. Burris, C. F. Laymance, Jack Spears, Judy Halsey, Mrs. E. L. Moore, Mrs. W. G. Story, and Billy Bryan.

The Shifters say their next event will be a crappie fishing rodeo in late March, set at Blue Springs Boat Dock. Details will follow, and all Y-12ers are welcomed.

## Used-Car Lingo Given For Buyer

Looking for a second car? Now's the time to buy, according to The Dow Corral. The used-car salesman will use some unknown language on you, too, adds the Corral. For your edification, here are some translations:

**One Owner Car**—He couldn't sell it either.

**Owned By a Doctor**—And driven by his son in drag races.

**Never Been Raced**—Former owner too embarrassed.

**Low Mileage Car**—The speedometer has been turned back.

**Driven Only 11,000 Miles**—Towed the rest of the way.

**Fair Condition**—Some paint left.

**Transportation Car**—Some car left.

**Rebuilt Engine**—The spark plugs have been cleaned.

**One Owner Car**—Eleven years with a cab company.

**Cream Puff**—Was in a head-on collision with a milk truck.

**Reconditioned**—With the cheapest seat covers that could be found.

**As Is**—Bring your own shovel.

**Must Be Sold This Week**—The Health Department is getting nasty again.

Most used-car lots are crowded these days. So happy hunting!



Ride wanted from Alcoa Highway vicinity to North Portal, straight day. A. W. Maxey, plant phone 3-7030, home phone Knoxville 577-7432.

## You're Moving Even When You're Standing!

Finish reading this sentence and you will be about half a mile east of the spot occupied before you started reading! During these few seconds the earth has turned a half mile on its axis and traveled about 30 miles along its course around the sun.

And to top this, the galaxy which earth is a part of moved away from the center of the universe about one thousand miles.





**BASSET ON A RUG**, C. L. Scalf calls this captivating photograph. It's really just plain old Gus, our seven-week-old basset hound, Scalf explains. Scalf, Environmental Control Engineering, says Gus has already taken over thier Kingston home.

## Stephens Rolls A 248 Game In Classic Play

League-leaders in the Classic Bowling League last week both dropped three points . . . the Playboys losing out to the Rippers, and the Has Beens to the Swingsters. Four point wins went to the Eagles over the Wasps, the Rebels over the Splinters and the Eightballs past the Smelters.

The Tigers took the Cubs for three, and the Markers took the same count from the Screwballs. The Bumpers and All Stars shared two points apiece.

Bill Stephens, Bumpers, belted out a 248 single scratch game . . . 276 handicap single! Ed Sise, Eagles, zeroed in with a 607 scratch series, 682 handicap total!

The Eagles were best on singles 937 scratch, 1123 handicap. The Rebels rolled a 2713 scratch series, and the Eagles returned to the boards with a 3128 handicap series!

Team	W	L
Playboys	22	10
Has Beens	22	10
Swingsters	21	11
Eagles	19	13
Tigers	18½	13½
Rebels	18½	13½
Splinters	17	15
Markers	16½	15½
Wasps	16	16
Cubs	16	16
Bumpers	16	16
All Stars	12	20
Screwballs	11	21
Rippers	10½	21½
Smelters	10	22
Eightballs	10	22

### DRY SPELL

No rain has ever been recorded at Calama in the Atacama Desert, Chile.

## Beavers Still Volleyball Best

The Scrubs opened play in the Volleyball League last week on Court A by taking four games from the Old Men, 15-6, 15-3, 15-13 and 15-4. The K-25 Mix-Ups also won four from the Neophytes 15-9, 15-7, 15-10 and 15-10.

Y-12's high-flying Beavers won four games . . . upping their wins to 39 full games . . . from the Charley Browns 15-6, 15-2, 15-7 and 15-8.

Action on Court B saw the K-25 Sports beat the Ecobums 15-10 . . . then the Bums returned to the floor to win three 15-10, 15-12 and 15-11.

The ORNL Beagles won the first three from the Y-12 Eagles 15-10, 15-8, 15-12 . . . while the Eagles took game number four 15-8.

Final action saw the ORNL Set-Ups beat the Tigercats 15-7, 15-4, 15-6 and 15-1.

League standings follow:

Team	W	L
Beavers, Y-12	39	1
Set-Ups, ORNL	32	8
Scrubs, ORNL	29	11
K-25 Sports	26	14
Ecobums, ORNL	26	14
Old Men	22	18
Tigercats, ORNL	18	22
Beagles, ORNL	15	25
Eagles, Y-12	13	27
Mix-Ups, K-25	11	29
Charley Browns, ORNL	7	33
Neophytes, Y-12	2	38

### HEADACHE ANYONE?

Production of acetylsalicylic acid—better known as aspirin—in the United States amounts to 37 million pounds a year. Half of it goes into 26 billion five-grain aspirin tablets; the balance into other formulated drugs.

## Golfer Hamill Takes Second Big Hole-In-One On Kingston Course!

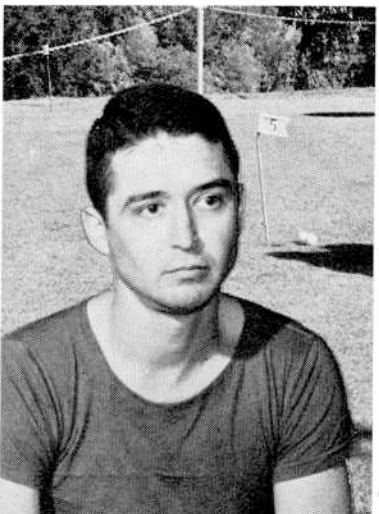
A hole-in-one is a life-time achievement for a golfer. Two really makes history!

Bill Hamill, Ceramics and Plastics Development, has come up with the impossible over the impossible odds . . . a second hole-in-one.

Bill aced the first one more than five years ago, in league play down at the Emory Golf and Country Club, Harriman.

Now, Hamill comes up with one at the Lakeside Club, Kingston. He zeroed hole number seven there, Sunday, January 21. Using a number four iron, he sliced two under the three-par hole.

The 165-yard hole accounted for Hamill's second big hole-in-one. Nice going, Bill.



Bill Hamill

## Recreation



**Saturday, February 25**

**BOWLING TOURNAMENT:** All teams and mixed doubles. Ark Lanes.

**Sunday, February 26**

**BOWLING TOURNAMENT:** Doubles and singles. Ark Lanes.

**Monday, February 27**

**BOWLING:** 5:45 p.m., C League, Ark Lanes.

**TABLE TENNIS:** 7 p.m. Wildcat's Den.

**BASKETBALL:** Beginning 6:30 p.m. Oak Ridge High School Gymnasium. Radioisotopes vs. B bar R's; Celtics vs. Braves; Has Beens vs. Collegians.

**Tuesday, February 28**

**PHYSICAL FITNESS:** 7 p.m., Oak Ridge High School Gymnasium (Women's PT held in Girls' Gym).

**Wednesday, March 1**

**BASKETBALL:** Beginning 6:30 p.m. Jefferson Junior High School Gym. Bombers vs. Bat Boys; Ecobums vs. B bar R's; VIP's vs. Radioisotopes.

**BADMINTON:** 7:30 p.m. Jefferson Junior High School Gym.

**BOWLING:** Mixed League, 8 p.m., Ark Lanes.

**Thursday, March 2**

**BOWLING:** 5:45 p.m., Classic League, Ark Lanes.

**VOLLEYBALL:** Beginning 6:30 p.m., Robertsville Junior High Gym. Court A: Neophytes vs. Scrubs; Beavers vs. Ecobums; Mix-Ups vs. Beagles; Court B: Charley Brown's vs. Tigers; Old Men vs. Set-Ups; K-25 Sports vs. Eagles.

**Sunday, March 5**

**SKEET TOURNAMENT:** 1 p.m. Oak Ridge Sportsman's Association Range.

## Fast Action Seen In Table Tennis

ORNL's Francois Kertesz continued his lead in the K Table Tennis League last week, by downing Jim Hallau and Harley Law, both for three games. Y-12's Winfred Collins took three from Law and Bob Bernard. He won two from Tudor Boyd.

**K League Standings:**

Player	W	L
Francois Kertesz, ORNL	14	1
Winfred Collins, Y-12	12	6
Joe Lewin, ORNL	10	2
Bob Bernard, ORNL	5	7
Tudor Boyd, Y-12	6	9
Harley Law, Y-12	4	14
Ed Isham, Y-12	3	6
Jim Hallau, Y-12	3	12

Bill Motley pushed his way further into the lead in the X League by downing Subbu Raman for three games . . . Herb Mook for two. Roy Huddleston breathed down Motley's back by winning three from Gordon Brewer. Raman defeated Ralph Einstein the full count . . . and Al Norris also won three from Einstein.

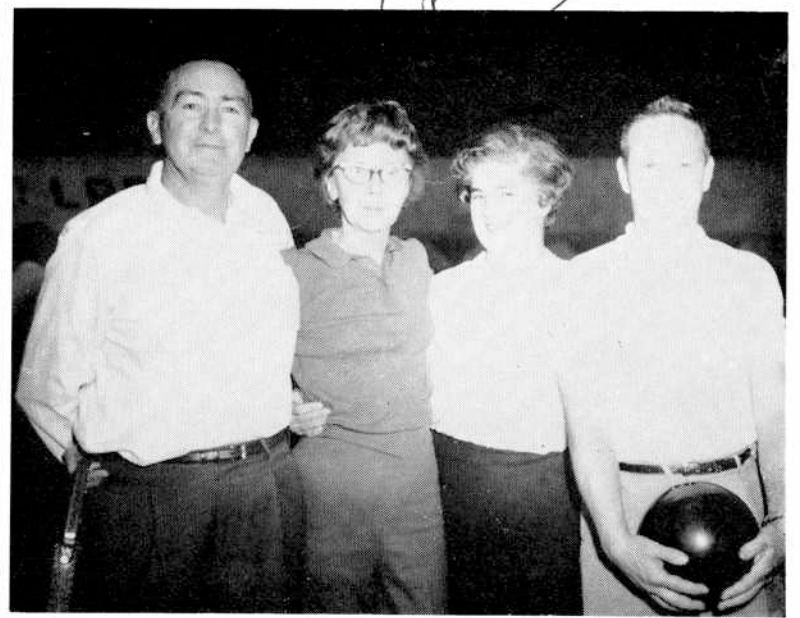
**X League Standings:**

Player	W	L
William Motley, Y-12	14	1
Roy Huddleston, Y-12	13	2
Herb Mook, ORNL	9	6
Subbu Raman, ORNL	6	6
Gordon Brewer, Y-12	6	9
Al Norris, Y-12	4	11
Fred Shull, ORNL	3	9
Ralph Einstein, ORNL	2	13

Y-12's Ed Gambill, inactive last week, is in charge of the current Y League standings. Art Weinberger won three from Tom Baldwin and Roy Matheny . . . two from Bob Coveyou. Matheny defeated Baldwin for the full count.

**Y-12 League Standings:**

Player	W	L
Ed Gambill, Y-12	10	5
Art Weinberger, ORNL	8	4
Ram Uppuluri, ORNL	5	1
Robert Coveyou, ORNL	6	3
Roy Matheny, ORNL	4	8
Stan Cantor, ORNL	0	6
Tom Baldwin, ORNL	0	6
Nick Case, ORNL	0	0



**SURE-FIRE TEAM FOR THE ROLL-OFF** in the Mixed League is the Roses 'N Thorns. They took the season's first-half, and are assured first or second place in overall standings. They are from left Roy and Dessie Worley, Barbara and Bill Hackett.

## Alley Tournament Set For Week-End

The big Bowling Tournament for Y-12ers is all set for this coming week-end. A total of 19 men's teams, and 18 mixed doubles hit the alleyways Saturday, February 25. The next day Sunday will see 46 men's doubles, 92 singles (with 75 males entering All Events competition) and 10 women's doubles . . . and all 20 women participating in singles . . . and 17 of them claiming All Events standings.

When possible, bring your own scorekeeper, says Recreation. Teams rolling with each other should get together on who is responsible for a scorekeeper.

Be on time, also warns Recreation. Tournament rules are very strict about bowlers arriving late. Listen to these unheeding words: "Bowling shall begin in accordance with a previously arranged schedule. Any player or team arriving late shall begin play with the score counting beginning with the frame then being bowled."

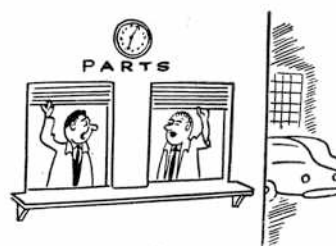
"If a team refuses to start because a full line-up is not present it shall forfeit all games which it declines to bowl at the discretion of the tournament secretary."

Further go the ABC rules, "No blind scores shall be permitted and a bowler must bowl on the same lanes, and at the same time his team bowls."

Strict adherence shall be maintained also on the order of bowling. No lead-off man shall start on the alleys until the clean-up man on his team has rolled his first ball.

Common bowling courtesy is required at the alleys too, as sportsmen and women gather for the big annual full-plant competition.

Recreation advises every bowler be there on time. The schedules have been issued to all participating in the league. If you do not have yours, check with your team captain now, or call Recreation, extension 3-7109.



## Hits & Misses Regain Mixed Top

Rumblings from the mid-section of standings in the Mixed League saw some changes made in standings—The Hits & Misses moved back into first place by virtue of a three-point win over the Novices. The Mustangs clipped four from the wings of the Goofers, and the Rollers rolled four past the Alley Cats. The Twisters tore three from the hides of the Roses 'N Thorns.

Bill Hackett, Roses 'N Thorns, hit his stride with a 209 scratch game, 237 handicap count. George Cantrell, Mustangs, collected a 550 scratch series; while Spence Ferguson rolled a 622 handicap series. Irene Carmack, Mustangs, swept women's honors . . . singles of 190 scratch, 232 handicap; series of 511, 637.

The Mustangs took all team honors . . . singles of 683 scratch, 81 handicap; series of 2054, 2389.

Team	W	L
Hits & Misses	18	10
Goofers	16	12
Twisters	15	13
Rollers	15	13
Mustangs	15	13
Roses 'N Thorns	14	14
Alley Cats	12	16
Novices	7	21

## Teams Move Up On C Leaders

The Badgers and Big Five keep a scant lead in the C Bowling League, with three other teams only out one point. The Badgers shared two points with the Rounders last week, and the Badgers did likewise with the Royal Flush. The Strikers moved up with a four point win over the Parbusters, and the Sunflowers swept by the Rodders by the same score. The Fireballs came up with three over the HiLifers, as did the Invalids over the Rollmasters.

Ray Galford, Sunflowers, rolled a 236 scratch single. Jim Householder, Strikers, struck a 252 handicap single. Householder's 627 (a new season high) in scratch series, and a 681 handicap series were tops.

The Big Five boasted a 956 scratch single count . . . while the Sunflowers rolled a 1058 handicap single total. The 'Flowers' 2687 scratch, 3038 handicap series were tops for the season.

Team	W	L
Big Five	15	9
Badgers	15	9
Fireballs	14	10
Strikers	14	10
Rounders	14	10
HiLifers	13½	10½
Royal Flush	12	12
Invalids	11	13
Rollmasters	9½	14½
Sunflowers	9	15
Rodders	9	15
Parbusters	8	16





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NUCLEAR DIVISION  
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(RETURN REQUESTED)

BULK RATE  
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Permit No. 71

## VIPs Take Lead In Basketball

Y-12 Basketballers got in nine licks last week on the hardwood . . . as the VIP's took the lead in fast action.

Two Y-12 teams opened play last Monday, as the Bat Boys tamed the Collegians 37 to 32 in overtime. Cecil Chitwood produced 11 points (three in the overtime period) for the winning cause, as did teammate Dave Hendrickson.

The B bar R's put their brand on the Braves 29 to 25. The Braves led at halftime 14 to 12 . . . but ran cold in the third period. Jim Milligan and Tim Butler accounted for eight each of the Braves' 25 points.

### Carter Scores Big

The VIP's won the final game Monday night from the Bombers, 55 to 44. Jim Carter had one of his best nights with 26 points. Larry Finch scored 14 also for the winners. Herman Thomas and Bob Culton scored 11 each for the losing squad.

The Radioisotopes rallied Wednesday to take one from the Ecobums, 59 to 41. Junior Hood had 16 for the winning team . . . Ernie Neal netted 10 for the losers. Halftime score was 42 to 32 in favor of the winning team . . . and they were not in trouble at all in the final two periods.

### Bat Boys Fall

The Celtics clamped a victory from the Bat Boys 55 to 47. Bill Schillinger led the winning squad with 17 points; Churchill Moore had 14. For the losers it was Romeo Greene with 18, and Hugh Beeson with 10.

Final action of the week gave the Has Beens a victory over the B bar R's, 57 to 46. Curtis McGinnis led the field with 18 points; Phil McCulley collected 14 for the winners. On the losing side, it was Dave Allison with 16.

League standings follow:

Team	W	L
VIP's, ORNL	5	0
Bombers, ORNL	4	1
Radioisotopes, ORNL	4	1
B bar R's, ORNL	3	2
Ecobums, ORNL	3	2
Braves, Y-12	1	3
Collegians, Y-12	1	3
Bat Boys, Y-12	1	4
Celtics, K-25	1	4
Has Beens, ORNL	1	4

## Cheap Export

Continued from Page 1

Historically the United States has been the cradle of freedom for all oppressed and downtrodden peoples of the world. Let us not permit it to become, through self-interest, greed, prejudice and fear, the deathbed of the same freedom. If this should ever happen, America will have belied more prophecies and grander promises than any nation ever made.

Take away all the noble phrases taken from the Bible, from the Torah, from the other great works behind us, and it all boils down to one simple fact. Intolerance and prejudice are tools of the ignorant. Let us as intelligent human beings have more pride in ourselves and in our brainpower than to accept the lies of the bigot, the slurs of the biased, and the whispers of the hate-mongers.

The stakes are high, as we observe another Brotherhood Week. By depriving someone else of his basic rights, we are gravely endangering our own rights. It's as simple as that.

### HIGH COST OF BOYS

The Department of Agriculture estimates that the family tab for feeding a 13 year old boy on a moderate cost menu, is \$9.70 per week or 90 cents more than it costs to feed a girl in the same age bracket.

## UCC To Build Complex In Africa

The formation of Union Carbide Kenya Limited, with an investment of nearly \$1,700,000, has been announced by Birny Mason Jr., chairman of the board of Union Carbide Corporation.

The new subsidiary, owned jointly by Union Carbide and Industrial and Commercial Development Corporation of Kenya, will build a modern battery plant in Nakuru, Kenya. This plant will manufacture EVEREADY flashlight batteries as well as batteries for transistor radios for sale throughout East Africa and adjoining countries.

Union Carbide affiliated companies have been active in Africa since 1923. In addition to a major marketing program in batteries, plastics, agricultural chemicals and other chemical products, operations on the continent include manganese, vanadium and chrome mines; a ferroalloy plant; and a farm for testing agricultural chemicals. These affiliates presently employ about 7,000 people.

## Working Women Number Increase In 10 Years

A study of the National Industrial Conference Board shows half the women in the United States, 14 years of age and over, will be working at one time or other this year. It estimates 38 per cent of the women will be in the labor force compared with 31 per cent in 1947. By 1975 it estimates 40 per cent of American women will either be working or looking for work. One in three married women, living with their husbands, was in the labor force last year compared with one in five in 1947. The 1965 labor force showed 3.1 million working moth-

## Completes Course In Cosmetology



Lula Mae Franklin

Lula Mae Franklin recently received her diploma in cosmetology. She completed 1,500 hours training at the Roane School of Beauty, Kingston.

Miss Franklin plans to work at the Magic Mirror Beauty Salon, Rockwood, after taking her state board examinations in Nashville, February 13. She is a 1966 graduate of Rockwood High School.

Her father is in Y-12's General Weld Shop. The Franklin home is at Route 3, Rockwood.

### ORIGIN OF SWEET TALK

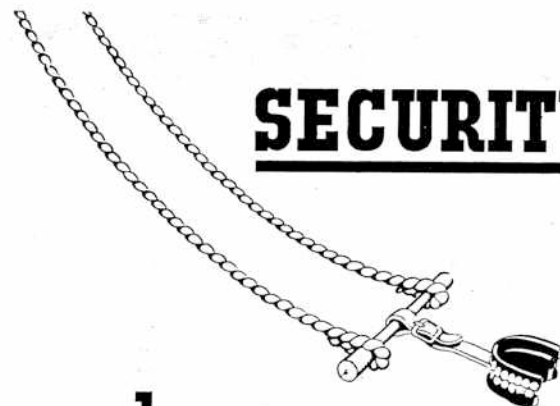
Breath sweeteners are more than 4,000 years old. Court officials in ancient China were required to hold cloves in their mouths when addressing the emperor.

ers with husbands present and children under the age of six.



**A LOT OF Y-12 IS CLAIMED** by this little fellow . . . a papa, two grand-papas, and a mother who is an ex-employee! He is little Russell Dale Allstun, born November 24, last year, to Dale and Nancy Allstun. Dale is in Numerical Control and Nancy formerly worked in the Specifications and Control Department. Grandfathers Russell A. Allstun is in the Fabrication Division; and Tasco Polston is in Maintenance.

## SECURITY



## depends on keeping mouth closed

### Biggest Gap In Security Program Is Still Lower Half Of Human Face

The biggest gap in our nation's security still remains the lower half of our face. Loose talk may not sink a ship anymore (like it did in World War II) but it may be that missing piece needed by enemy powers to piece together the overall picture.

Pride in workmanship is a fine thing. It is what made America the leading power in industry and technological advances. But, due to the nature of our work here in Y-12, we must keep that pride to ourselves. The best rule is to block out our work in conversation away from the plant. (Remember, our families are not security-cleared . . . and they have no "need to know" either.)

There's enough in this old world to talk about without boring outsiders with details of our jobs. The keen ear of espionage is always tuned in for the blabber-mouth who unwillingly and unknowingly reveals his nation's secrets. A mere agreement or disagreement in an argument may tip the scales also. "The condition upon which God hath given liberty to man is eternal vigilance; which condition if he break, servitude is at once the consequence of his crime and the punishment of his guilt." Thus, in our everyday talk, vigilance becomes the key word.

On-the-job talk is restricted to a "need-to-know basis." No information is to be transmitted to anyone unless that information is needed in the performance of the job.

While nobody wants to be an-

other Benedict Arnold . . . it's highly possible in our sensitive jobs, we may accidentally become one.

The cartoon used above was borrowed from the Knolls Atomic Power Laboratory, Security Branch.

## Snap Device Orbits For Five Years!

The first nuclear power generator in space recently marked its fifth anniversary. This historic generator, developed by the Atomic Energy Commission, has traveled about 724,000,000 miles (over 25,000 times around the world) and continues to provide power aboard the Navy's experimental navigational satellite 4-A.

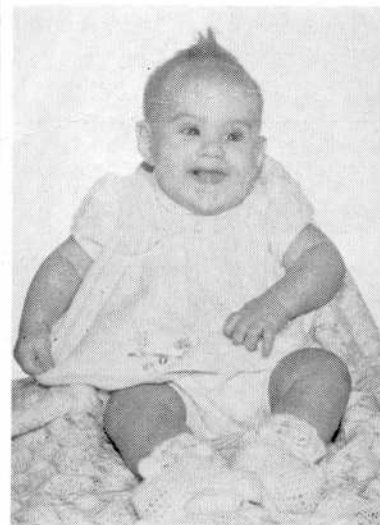
The grapefruit-sized five-pound, three-watt nuclear generator was installed to supplement solar power on the 175-pound drum-shaped satellite which is still signaling intermittently to tracking stations around the world.

The satellite was launched June 29, 1961, from Cape Canaveral. It became the oldest operating United States satellite in May 1964.

A second, similar Navy satellite with the same type of nuclear generator was launched in November 1961 and operated until July 1962. Two Navy navigational satellites were launched in 1963 from Vandenberg Air Force Base, California, with larger nuclear generators developed by the AEC. These generators provided all the power to the satellites during their operating life.

All four generators were developed under the Atomic Energy Commission's SNAP (Systems for Nuclear Auxiliary Power) program. The aim of the program is the development of compact lightweight, reliable nuclear electric devices for unattended operation in all environments. A variety of radioisotopes may be used as the fuel for generators of this type. The heat generated from the radioactive decay of the fuel is converted directly into electricity through thermocouples which surround the fuel. A thermocouple is composed of two dissimilar metals joined together at both ends, producing a loop in which an electric current will flow when there is a difference in temperature between the two junctions.

Other SNAP generators are operating in the sea. One is supplying electrical energy for a Navy acoustic beacon located at the bottom of the Atlantic Ocean. The first nuclear powered Navy deep-sea floating weather station has completed over two years of operation in the Gulf of Mexico, and is still fully functioning despite encounters with two hurricanes.



**PRETTY LISA** Lee Wilkerson is the first granddaughter of Mr. and Mrs. R. E. Wilkerson, (Department 2014) . . . and the daughter of Mr. and Mrs. Jimmy L. Wilkerson, Oak Ridge. They do have a grandson "Butch" Hughes who lives in Knoxville with parents Mr. and Mrs. Frank Hughes.